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Serial No.: 10/519,856

Docket No.: PU020329

Art Unit: 2169

Examiner: Sherief Badawi

Appeal Brief (15 pages)

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of David Aaron Crowther et al.

Serial No.: 10/519,856

Filed: December 29, 2004

For: HETEROGENEOUS DISK STORAGE  
MANAGEMENT TECHNIQUE

Art Unit: 2169

Examiner: Sherief Badawi

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**APPEAL BRIEF**

**Appeal from Group 2167**

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This Appeal is from a Final Office Action mailed on June 21, 2007 (hereinafter, referred to as the "Final Action") and an Advisory Action mailed on September 6, 2007 (Advisory Action). This Appeal was commenced by a Notice of Appeal filed on September 21, 2007. Appellants hereby submit this Appeal Brief in furtherance of the Appeal.

**I. REAL PARTY IN INTEREST**

The real party in interest for the above-identified application is Thomson Licensing LLC, the assignee of the entire right, title and interest in and to the subject application by virtue of an assignment of record in the U.S. Patent and Trademark Office.

**II. RELATED APPEALS AND INTERFERENCES**

There are no Appeals or Interferences known to Applicant, Applicant's representatives or the Assignee, which would directly affect or be indirectly affected by or have a bearing on the Board's decision in the pending Appeal.

**III. STATUS OF CLAIMS**

Claims 1-3, 5-9 and 11 are pending, stand rejected and are under appeal. Claims 4 and 10 have been canceled. The claims are set forth in the attached Appendix.

**IV. STATUS OF AMENDMENTS**

An after final amendment was filed on August 21, 2007 (AF Amendment). The Advisory Action indicated that the AF Amendment would be entered for purposes of appeal and, thus, the claims in the Claims Appendix reflect the claim amendments that are presented in the AF Amendment and which are subject to this appeal.

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**V. SUMMARY OF CLAIMED SUBJECT MATTER**

For purposes of illustration, the subject matter of the claims will be described with reference to certain Figures and corresponding text of Appellants' Specification (hereinafter, "Spec."), for example, but nothing herein shall be deemed as a limitation on the scope of the invention. For each Claim listed below, the claim elements are presented in italicized text, and are followed by citation to exemplary figures and/or supporting text in Appellants' Spec.

In general, the claimed subject matter is directed to methods and apparatus for managing storage devices. One aspect of the present principles is low-level management of storage devices originating from different manufacturers, which are associated with a single host system (10), such as a personal computer or mini-computer (see Spec. p.2, lines 32-33, p.3, lines 1-3) Operating characteristics of the storage devices are often unique due to their origination from different manufacturers and, therefore, storage devices may be better managed by taking their individual operating characteristics into account (see Spec., p. 3, lines 2-3).

**Claim 1 recites:**

*A method for managing at least one storage device, comprising the steps of: (see generally, FIGs. 1 and 2).*

*(a) identifying the at least one storage device; (see, e.g., Spec., p. 4, lines 17-25)*

*(b) establishing a database containing information about the identified at least one storage device, wherein the information about the identified at least one storage device includes operating characteristics of the identified at least one storage device; (see, e.g., Spec., p. 3, lines 17-18; p. 4, lines 27-32)*

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*(c) providing to the user a graphical user interface in accordance with the information in the database, the graphical interface displaying at least one menu option for the identified at least one storage device for the user to select at least one of (i) display of the information about the identified at least one storage device and (ii) execution of at least one process to control the operation of the at least one storage device; ; (see, e.g., Spec., p. 5, lines 1-2, lines 17-19)*

*(d) processing the user-selected menu option, said processing further including: determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution of the at least one process, and generating an error message; and (see, e.g., Spec., p. 3, line 26 ~ p. 4, line 6)*

*(e) automatically updating the graphical user interface in response to the processing of the user-selected menu option. ; (see, e.g., Spec., p. 6, lines 12-15)*

**Claim 7 recites:**

*Apparatus for managing at least one storage device, comprising: (FIGs. 1 and 2)  
a database containing information about the at least one storage device,  
wherein the information about the at least one storage device includes operating characteristics of the at least one storage device; and (see, e.g., Spec., p. 3, lines 12-22)  
a processor coupled to the at least one storage device for; (see, e.g., Spec., p. 3, lines 12-13)*

*(a) identifying the at least one storage device; (see, e.g., Spec., p. 4, lines 15-20)*

*(b) providing to a user a graphical user interface in accordance with the information in the database, the graphical interface displaying at least one menu option for the-identified at least one storage device for the user to select at least one of (i) display of information about the identified at least one storage device and (ii) execution of at least one process to control the operation of the at least one storage device; (see, e.g., Spec., p. 4, lines 7-13)*

*(c) processing the user-selected menu option, by (i) determining if the requested execution of the at least one process complies with the operational rules for the identified at least*

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*one storage device, and if not, (ii) blocking execution of the at least one process; and (iii) generating an error message; and (see, e.g., Spec., p. 3, line 26 ~ p. 4, line 6)*

*(d) automatically updating the graphical user interface in response to the processing of the user-selected menu option. (see, e.g., Spec., p. 6, lines 12-15)*

#### **VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

A. Claims 1-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Baldwin et al. (U.S. Patent No. 7,171,624 B2) in view of Lavallee et al. (U.S. Patent No. 7,003,527).

#### **VII. ARGUMENTS**

##### **A. No Prima Facie Case of Obviousness Has Been Presented Against the Claimed Subject Matter Based on the Combination of Baldwin and Lavallee**

"In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). It is well established that a *prima facie* showing of obviousness requires, in general, a two part analysis – starting with a claim interpretation analysis to determine the scope and substance of the subject matter being claimed, followed by an obvious analysis to determine whether the claimed subject matter (as interpreted) is obvious in view of the prior art. Once the claims have been properly constructed, the Examiner has the burden of establishing a *prima facie*



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case of obviousness. 'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

It is respectfully submitted that the obviousness rejections premised on the combined teachings of Baldwin in view of Lavallee are legally deficient as a matter of fact and law. Indeed, as will be explained below, at the very least, the Final Office Action and Advisory Action fail to provide a legally sufficient showing to establish a *prima facie* case of obviousness against claims 1 and 7 based on Baldwin and Lavallee.

**1. The Examiner Has Not Presented a *Prima Facie* Case of Obviousness against Claim 1 based on Baldwin and Lavallee**

Appellants respectfully assert that the Final Action and Advisory Action are devoid of a reasoning to present a *prima facie* case of obviousness against claim 1. For example, the Examiner has not demonstrated how the combination of Baldwin and Lavallee teaches or fairly suggests a method for managing at least one storage device, which includes, for example, *providing to the user a graphical user interface in accordance with the information in the database, the graphical interface displaying at least one menu option for the identified at least one storage device for the user to select execution of at least one process to control the operation of the at least one storage device and processing the user-selected menu option, said processing further including determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution*



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of the at least one process, and generating an error message, as essentially recited in claim 1.

On page 6 of the Final Action, the Examiner cites Baldwin at Paragraphs 414, 422 and 189 as allegedly showing the above claim features. The citation to paragraph numbers is unclear as there are no paragraph numbers in Baldwin. Notwithstanding, Baldwin seems to teach (by keyword) “rules” at Col. 78, line 11, control characters at Col. 78, line 56, and “severe error message” at Col. 43, line 58). However, the cited sections do not teach a process in which a determination is made as to whether the execution of the at least one process “complies” with the operational rules for the identified storage device. Furthermore, Baldwin does not specifically teach or remotely suggest a process of blocking of an execution when there is no compliance with the operational rules. In contrast, Baldwin specifically teaches that a “rule” itself is comprised of two sections, the id section and the management section. The id section is used to uniquely identify the device to be managed. The management information relates to a certain method for managing a particular device. (Col. 78, lines 11-20). The management information section is comprised of: 1) Type – one of four types: a) Telnet; b) URL; c) Application; d) SNMP; 2) Primary – a Boolean value indicating if this is a primary management method for the device; 3) Command – command section containing the command format and static parameters, and the discovered parameters. (Col. 80, lines 1-8). In this regard, the cited sections of Baldwin do not teach that the id section and/or management information section, operates to determine if a requested execution of a process “complies” with the operational rules for that storage device.

Although Baldwin discloses a Discover engine database which generates a severe error

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message as cited by the Examiner, the error is generated in the event of a significant mismatch between databases (See Col. 43, lines 57-61). In this regard, Baldwin does not disclose or suggest an error generation process that occurs when "compliance" with operational rules of the storage device is not found. The mismatch in databases is not the same as or similar to a compliance check with the operational rules of a particular storage device in the network.

The above arguments were presented to the Examiner in the AF Amendment.

Apparently, the Examiner recognized, and conceded to, his misplaced reliance on Baldwin by virtue of the Advisory Action, in which the Examiner relied, instead, solely on Lavallee as teaching the above claim features. In particular, in the Advisory Action, the Examiner cites Col. 3, lines 4-65; Col. 5, lines 45-50, and lines 65-67 Lavallee as supposedly disclosing. determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution of the at least one process, and generating an error message, but such reliance is misplaced.

For example, Col. 3, lines 4-65 of Lavallee generally discloses a management application that operates in an API that is designed to provide a set of uniform, platform independent management commands (function calls) through which platform specific management agents can access and control underlying storage area network elements. There is nothing in the cited section that explicitly teaches or suggests determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution of the at least one process, and generating an error message

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Moreover, Lavallee teaches in Col. 5 -Col. 6 lines 1-4 the use of "access wrappers" that provide a functional call interface and translation layer interface that can convert generic management commands into one or more vendor specific commands for management of elements within the storage areas network (e.g., Col. 5, lines 35-44; Col. 6 lines 1-4). Again, there is nothing in the cited section that explicitly teaches or suggests determining determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution of the at least one process, and generating an error message.

Therefore, in view of the above, the Examiner has not demonstrated how each and every claim element of claim 1 is disclosed or suggested by the combined teachings of Baldwin and Lavallee. For example, at the very least, there is no showing how Baldwin and Lavallee, singularly or in combination, teach or suggest determining whether the requested execution complies with the operational rules for the particular storage device.

**2. The Examiner Has Not Presented a Prima Facie Case of Obviousness against Claim 7 based on Baldwin and Lavallee**

For similar reasons discussed above with reference to claim 1, Appellants respectfully assert that the Final Action and Advisory Action are devoid of a reasoning to present a *prima facie* case of obviousness against claim 7. For example, the Examiner has not demonstrated how the combination of Baldwin and Lavallee teaches or fairly suggests an apparatus for managing at least one storage device, which includes, for example, a processor for

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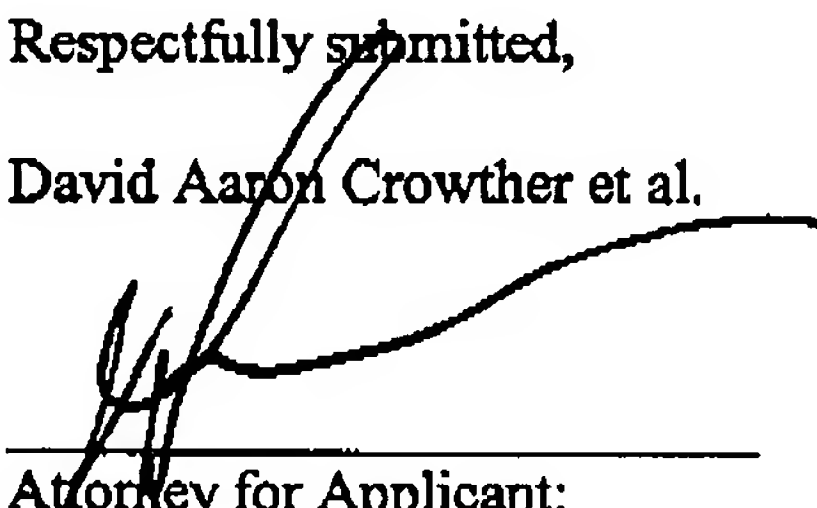
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processing the user-selected menu option, by (i) determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, (ii) blocking execution of the at least one process; and (iii) generating an error message. The Examiner's obviousness analysis for claim 7 is based on the same exact rationale as for claim 1. In this regard, for those reasons stated above, no prima facie case of obviousness has been presented to sustain the obviousness rejection of claim 7.

Accordingly, for at least the above reasons, it is respectfully requested that the Board reverse all claim rejections under 35 U.S.C. §103.

Respectfully submitted,

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**Claims Appendix**

1. A method for managing at least one storage device, comprising the steps of:
  - (a) identifying the at least one storage device;
  - (b) establishing a database containing information about the identified at least one storage device,  
  
wherein the information about the identified at least one storage device includes operating characteristics of the identified at least one storage device;
  - (c) providing to the user a graphical user interface in accordance with the information in the database, the graphical interface displaying at least one menu option for the identified at least one storage device for the user to select at least one of (i) display of the information about the identified at least one storage device and (ii) execution of at least one process to control the operation of the at least one storage device;
  - (d) processing the user-selected menu option, said processing further including:  
  
determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, blocking execution of the at least one process, and generating an error message; and
  - (e) automatically updating the graphical user interface in response to the processing of the user-selected menu option.

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2. The method according to claim 1 wherein the step of identifying the at least one storage device comprises the step of ascertaining a manufacturer and model number for the at least one storage device.

3. The method according to claim 1 wherein the step of establishing a database comprises the step of obtaining information that includes at least one of (a) operational rules, (b) commands and (c) processing routines of the one storage device.

4. (Canceled)

5. The method according to claim 1 wherein the step of providing a graphical user interface includes the steps of:

displaying icons representative of each identified at least one storage device in a hierarchical fashion in a first pane; and

displaying information in a second pane related to a corresponding one of the icons displayed in the first pane.

6. The method according to claim 1 wherein steps (d) and (e) are repeated following receipt of each subsequent menu selection made by a user.



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7. Apparatus for managing at least one storage device, comprising:  
a database containing information about the at least one storage devices,  
wherein the information about the at least one storage device includes operating characteristics of the at least one storage device; and  
a processor coupled to the at least one storage device for (a) identifying the at least one storage device; (b) providing to a user a graphical user interface in accordance with the information in the database, the graphical interface displaying at least one menu option for the identified at least one storage device for the user to select at least one of (i) display of information about the identified at least one storage device and (ii) execution of at least one process to control the operation of the at least one storage device; (c) processing the user-selected menu option, by (i) determining if the requested execution of the at least one process complies with the operational rules for the identified at least one storage device, and if not, (ii) blocking execution of the at least one process; and (iii) generating an error message; and (d) automatically updating the graphical user interface in response to the processing of the user-selected menu option.

8. The apparatus according to claim 7 wherein the processor identifies the at least one storage device by ascertaining its manufacturer and model number.

9. The apparatus according to claim 7 wherein the database contains information that

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includes at least one of (a) operational rules, (b) commands and (c) processing routines of the one storage device.

10. (Canceled)

11. The apparatus according to claim 7 wherein the processor provides the graphical user interface by (a) displaying icons representative of each identified at least one storage devices in a hierarchical fashion in a first pane; and (b) displaying information in a second pane related a corresponding one of the icons displayed in a first pane.

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**Evidence Appendix**

There is no evidence submitted pursuant to 37 CFR §§ 1.130, 1.131 or 1.132 or any other evidence entered by the examiner and relied upon by appellant in this Appeal.

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**Related Proceedings Appendix**

None.